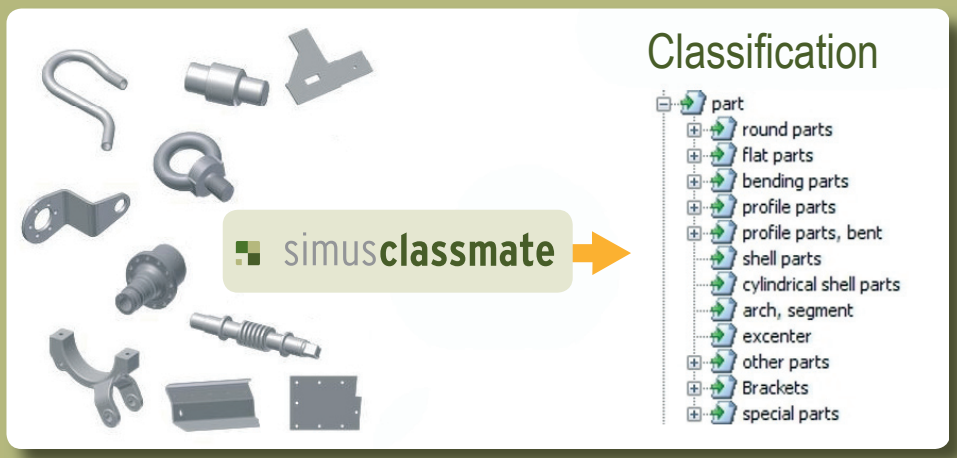
simussystems

simusclassmate CAD

classmate CAD for an automated classification of 3D CAD models

Using classification without having the manual maintenance effort



Classification of solutions is an approved concept for reutilization

Modeling with 3D CAD systems has a positive effect in many respects. Although quick creation of new models without considering existing design solutions increases the administration costs. Therefore many companies are looking for possibilities to improve the reutilization of parts and assemblies.

classmate CAD is a software tool for a fully automated classification of 3D CAD models. It is an extension to existing CAD- and PDM-systems to automatically fill a classification with correct feature values. In the process image information like contours, viewer formats and thumbnails are automatically derived.

classmate CAD classifies 3D CAD models in order to disburden designers

Modeling with 3D CAD systems has a positive effect in many kinds. 3D CAD models increasingly provide more precise information than 2D drawings ever could. Issues like collision detection and manufacturing problems can be identified and eliminated during the design process. New models can be derived from existing solutions within a few seconds.

With every new design solution the administration costs in the following company departments grow. Expenses occur for writing master data information, bills of materials, process plans, proof and documentation of quality assurance, service information and storage costs during the business process.

In order to reduce these costs, companies have been trying to increase the reutilization of existing solutions. For this purpose PDM systems are being implemented. They are indeed necessary for data administration of CAD models, drawings and other documents. However the task “reutilization by search and retrieval from a huge data stock” is insufficiently solved by PDM systems.

Missing naming conventions and classification information prevent the quick retrieval of information. Parts are often stored under nonrepresentational names as shaft, bolt or plate without further description and therefore cannot be identified when searching for the name.

With **classmate** CAD simus systems offers a proven solution for using the common advantages of a detailed classification without maintenance expenses.

classmate CAD automatically analyzes 3D CAD models and extracts feature information like dimensions, contours, holes, patterns, chamfers and notches. This information is used to fill up the classification and the feature list. Furthermore image information like schemes, 2D drawings and 3D viewer formats are assigned or derived.

These results are automatically generated without additional efforts of the designer. No specific modeling technique is needed. The designer himself creates his design solution as usual and saves/releases it to the PDM system. Controlled for example by the release status in the workflow, **classmate** CAD generates the classification information. The results are available within seconds and stored to the database. This implies that the business processes do not need to be adapted for **classmate** CAD and the tool can be established within a short span of time.